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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,486	10/20/2003	Keyvan Sayyah	B-4666NP 620573-9	3855
36716	7590	01/12/2005	EXAMINER	
LADAS & PARRY 5670 WILSHIRE BOULEVARD, SUITE 2100 LOS ANGELES, CA 90036-5679			HASAN, MOHAMMED A	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/690,486

Applicant(s)

KEYVAN SAYYAH ET AL

Examiner

Mohammed Hasan

Art Unit

2873

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/2/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 19, 21 - 34, 40 - 63 is/are pending in the application.
- 4a) Of the above claim(s) 20, 35 - 39, is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 - 19, 53 - 56, 58, 59, 62 is/are allowed.
- 6) ☒ Claim(s) 1, 8, 21 and 40 is/are rejected.
- 7) ☒ Claim(s) 2 - 7, 9 - 13, 22 - 34, 41 - 52, 57, 60, 61, 63 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

Note: Restriction withdraws from claims 40 – 52, and 61 (i.e., claim 40, is an apparatus claim).

### ***Claim Objections***

1. Claim 63 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8, 21 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Jacobson et al (2002/0001046 A1).

Regarding claim 1, Jacobson et al discloses (refer to figures 7A and 7B) an optical apparatus comprising: a two dimensional array of modulator (54) and /or detector pixels embedded in a flexible or deformable body (i.e., a flexible substrate 52),

Art Unit: 2873

the modulation and or detector pixels responding to applied electrical signals to modulator and /or detector pixels responding to applied electrical signals to modulate and reflect light impinging the modulator and/or detector pixels and an optical arrangement for directing an incoming optical beam for an optical transmitter onto a selected one or ones of modulator and / or detector pixels in array and for returning light which is modulated and reflected by pixels to an optical transmitter from which the incoming beam was directed to the optical arrangement (paragraph 0082) .

Regarding claim 8, Jacobson et al discloses , the flexible or deformable body has a sheet-like polymer support element in which the two dimensional array of modulator and / or detector pixels are embedded (paragraph 0025).

Regarding claim 21, Jacobson et al discloses (refer to figures 7A and 7B) an optical apparatus comprising: a two dimensional array of modulator (54) and /or detector pixels embedded in a flexible or deformable body (i.e., a flexible substrate 52), the modulation and or detector pixels responding to applied electrical signals to modulator and /or detector pixels responding to applied electrical signals to modulate and reflect light impinging the modulator and/or detector pixels and an optical arrangement for directing an incoming optical beam for an optical transmitter onto a selected one or ones of modulator and / or detector pixels in array and for returning light which is modulated and reflected by pixels to an optical transmitter from which the incoming beam was directed to the optical arrangement (paragraph 0082).

Regarding claim 40, Jacobson et al discloses (refer to figures 7A and 7B) an optical apparatus comprising: a two dimensional array of modulator (54) and /or

Art Unit: 2873

detector pixels embedded in a flexible or deformable body (i.e., a flexible substrate 52), the modulation and or detector pixels responding to applied electrical signals to modulator and /or detector pixels responding to applied electrical signals to modulate and reflect light impinging the modulator and/or detector pixels and an optical arrangement for directing an incoming optical beam for an optical transmitter onto a selected one or ones of modulator and / or detector pixels in array and for returning light which is modulated and reflected by pixels to an optical transmitter from which the incoming beam was directed to the optical arrangement (paragraph 0082) .

***Allowable Subject Matter***

3. Claims 14 – 19, 53 – 56, 58, 59, and 62 are allowed.
4. The following is an examiner's statement of reasons for allowance: The prior art taken either singularly or in a combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 14,18, 19 and 53, for example which include an electronic apparatus for detecting the data on the first incoming optical beam and for modulating the second incoming beam at second selected one or ones of modulator or detector pixels in an array using this data and the second incoming beam is reflected at second selected one or ones of modulator or detector via the optical arrangement to second optical transmitter and an electronic apparatus for storing the

Art Unit: 2873

data on the first incoming optical beam in memory and for modulating the second incoming beam at second selected one or ones of modulator or detector pixels via the optical arrangement back to second optical transmitter and a control apparatus for individually controlling the individually addressable modulator / or detector pixels to reflect the light which is modulated and the reflected by pixels when the optical beam is from an authorized or friendly source and inhibit the optical reflection by the individually addressable modulator and or detector pixels when the optical beam is not from an authorized or friendly source.

5. Claims 2 – 7, 9 - 13, 22 – 34, 41 – 52, 57, 60, and 61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to show when light impinges on pixels and supplying data signals to pixels to cause pixels to reflect the impinging light in accordance with data signals applied thereto and the detector pixels is an array of Asymmetric Fabry-Perot Multiple Quantum Well devices, the plastic support element is relatively plastic at temperature above room temperature and each modulator pixel comprises a plurality of AFP MQW devices, each modulator pixel comprises at least one AFP MQW devices and at least one optically activated switch connected in series with at least one AFP MQW device, two optically switches connected in series with at least one AFP MQW devices, the modulator /or detector pixels are arranged in an array separated by pixel

Art Unit: 2873

addressing arranged in a matrix , each modulator pixel having a pair of contacts for connection to separate adjacent addressing and the hemispherical configuration is defined by a flexible or deformable body and the sub-wafers each have a generally flat polygonal configuration and the geometric shape is a hemispherical , geodesic configuration.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art

Fitzpatrick et al (US 2004/0114210 A1) discloses a deformable mirror element with a high natural frequency has elongate ribbons attached along a longitudinal portion thereof to a support.

Holman et al (6,831,769 B2) discloses, an electro-optic display and lamination adhesive.

Huibers (6,538,800 B2) discloses a spatial light modulator includes an upper optically trans-missive substrate held above a lower substrate containing addressing circuitry.

### ***Conclusion***

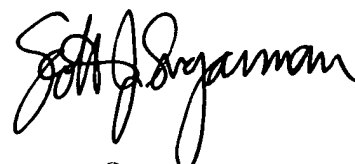
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

Art Unit: 2873

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272- 2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MH  
January 8, 2005



Scott J. Sugarman  
Primary Examiner